US Department of Commerce, Office of Health and Consumer Goods
2005 Processed Foods Outlook

Food Manufacturing Industry Definition

> *The food manufacturing industry (NAICS 311) transforms livestock and agricultural products into products for intermediate or final consumption. Subsectors in this category include animal food manufacturing (NAICS 3111), grain and oilseed milling (NAICS 3112), sugar and confectionary product manufacturing (NAICS 3113), fruit and vegetable preserving and specialty food manufacturing (NAICS 3114), dairy product manufacturing (NAICS 3115), meat product manufacturing (NAICS 3116), seafood product preparation and packaging (NAICS 3117), bakeries and tortilla manufacturing (NAICS 3118), and other food manufacturing (NAICS 3119).*
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> *Establishments primarily engaged in manufacturing beverages and tobacco are classified separately in Subsector 312, Beverage and Tobacco Product Manufacturing and are not covered in this chapter.*

Demographic Change

According to USDA, average food spending per person increased about 2.4 percent during 1992-2002, from $2,191 to $2,245. About 43 percent of the food dollar was spent on food away from home in 2002. The growing trend of smaller households and rising income levels will likely increase spending on food away from home in the years ahead. Smaller households are more likely to eat out since the time and expense of preparing meals declines as family size grows.

Consumers are demanding quick preparation in their food products and retailers and manufacturers have responded by offering more convenience and innovatively packaged, ready to serve products. Snack foods, snack bars, and frozen foods are popular and cater to double income households and consumers who are generally short on time. The aging U.S. population and rising per capita incomes should cause this trend to continue.

As the U.S. population becomes increasingly ethnically diverse, consumer demand for food products also diversifies. The Hispanic population continues to grow rapidly and processed food companies are developing new products for this population. Some retailers and supermarkets now cater specifically to Hispanic populations. Also, many traditionally ethnic food products are crossing over to the mainstream population.

Other factors affecting demand for processed food in the U.S. market include concern about dieting and obesity, which are generating interest in weight-loss food products and low-carbohydrate options due to the popularity of the Atkins diet. The health, sports and

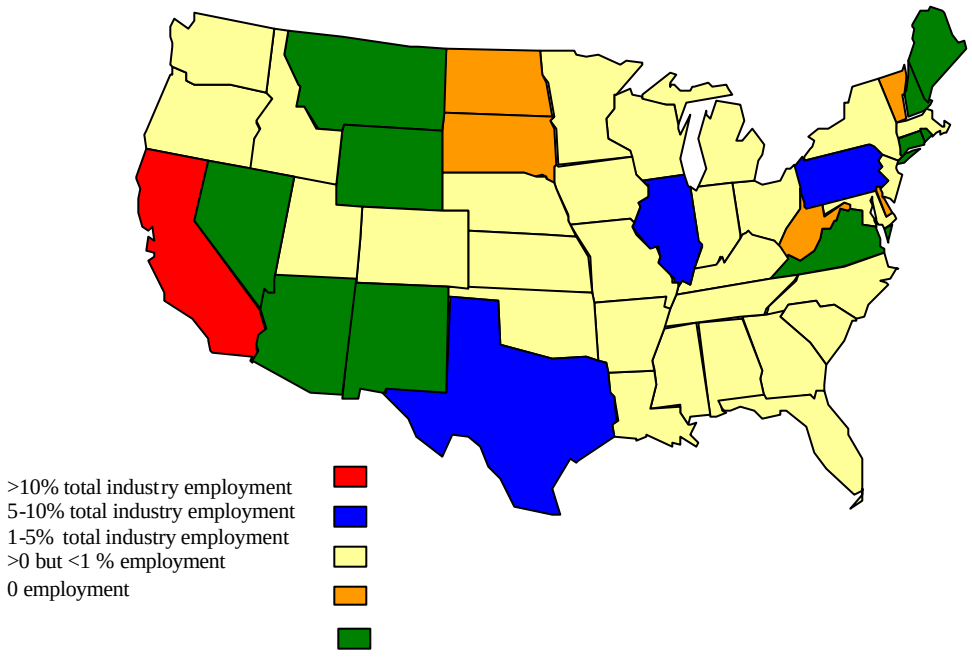
fitness market is growing, and products that offer nutrition and energy benefits are popular.

Organic food is another market segment that is growing rapidly due to increased consumer interest in healthy products. Organic food can now be found in traditional supermarkets, natural food stores, and other retail markets. According to DataMonitor, the U.S. organic market is projected to reach a value of $30.7 billion by 2007 with a five-year annual compound growth rate of 21.4 percent between 2002 and 2007. USDA estimates that organic product sales were more than $11 billion in 2003 and will reach almost $22 billion in sales in 2010. Although USDA and DataMonitor figures differ, both indicate the rapid growth of this segment of the processed food industry. Popular organic products include fresh produce, nondairy beverages, breads and grains, packaged foods, and dairy products. In response to rapid growth in the industry, USDA issued new Federal standards for organic food in October 2002. In accord with the new standards, a certified organic processed product must use at least 95 percent organic ingredients to be labeled or represented as organic.

Economic and Geographic Concentrations

Geographically, the largest percentage of workers in the industry is concentrated in California, making up 11 percent of the food processing industry workforce in 2004. Texas, Illinois, and Pennsylvania employed significant percentages of the food processing workforce at 7 percent, 6 percent, and 5 percent respectively with the rest of the workforce fairly evenly distributed across the United States (see chart).

2004 Employment in Processed Food Industry by State



Source: U.S. Department of Labor, Bureau of Labor Statistics, 2004, State Employment for Food Manufacturing

Consolidation is Slowing

According to the Food Institute, there were 395 mergers and acquisitions in the food manufacturing industry in 2004, down slightly from 415 in 2003. The slow economy resulted in less activity than in past years, down from a high of 813 mergers in 1998. However, acquisitions and mergers have already resulted in consolidation of some of the largest companies in the industry.

Consolidation among food retailers increased from 27 mergers and acquisitions in 2002 to 42 in 2003. Despite increased consolidation, prices have remained low due to discount retailers such as Costco and Wal-Mart that sell large volume food products. Also, more consumers are buying from restaurants and take out establishments, which compete with food retailers. Competition between warehouse clubs, traditional retailers, and restaurants has kept the rise in food prices below inflation levels.

Economic Overview

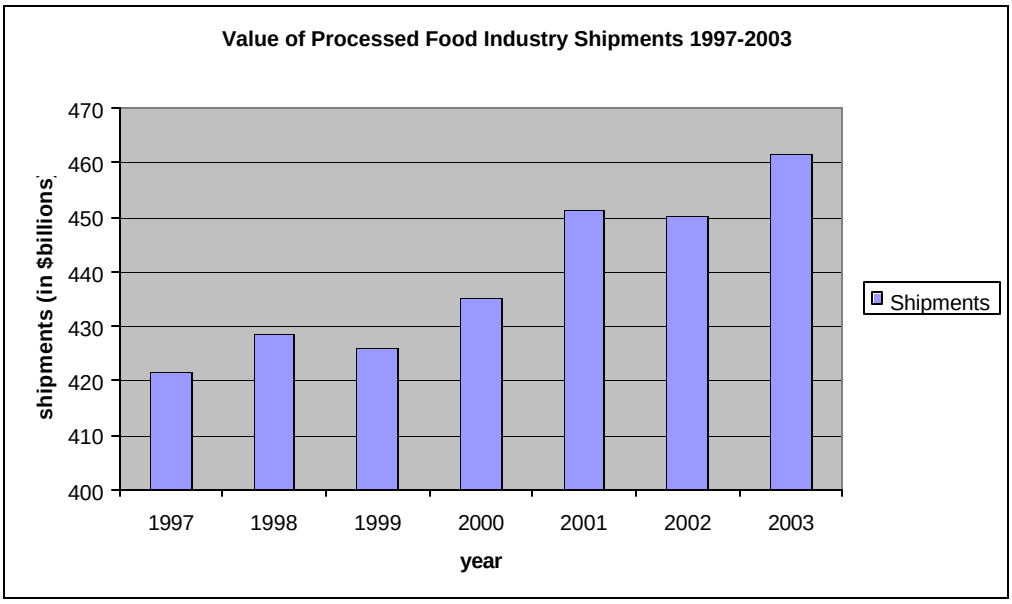
U.S. Domestic Industry Overview

The food manufacturing industry is one of the United States' largest manufacturing sectors, accounting for more than 10 percent of all manufacturing shipments. The processed food industry has experienced steady growth over the 1997-2003 period. In 2003, the value of food shipments was $461.6 billion, an increase of 9 percent from 1997 shipments of $421.7 billion (see chart).[1] Demand for processed food products is less affected by economic upswings and downswings than other industries since food is a necessary purchase.

According to USDA, in 2002, families spent only 10 percent of their household disposable income on food; 6 percent on food consumed at home and 4 percent on food consumed away from home. The consumer price index (CPI) for food rose 2.2 percent in 2003. Due to sustained economic growth, consumer demand for food is expected to increase with rising disposable personal income. Consumer demand, marketing costs, and commodity prices can have an effect on food prices.

In 2004, the ten largest U.S. companies in this sector were Archer Daniels Midland, Kraft Foods, Cargill, PepsiCo, Tyson Foods, Coca-Cola, Mars, ConAgra, Anheuser-Busch, and General Mills.

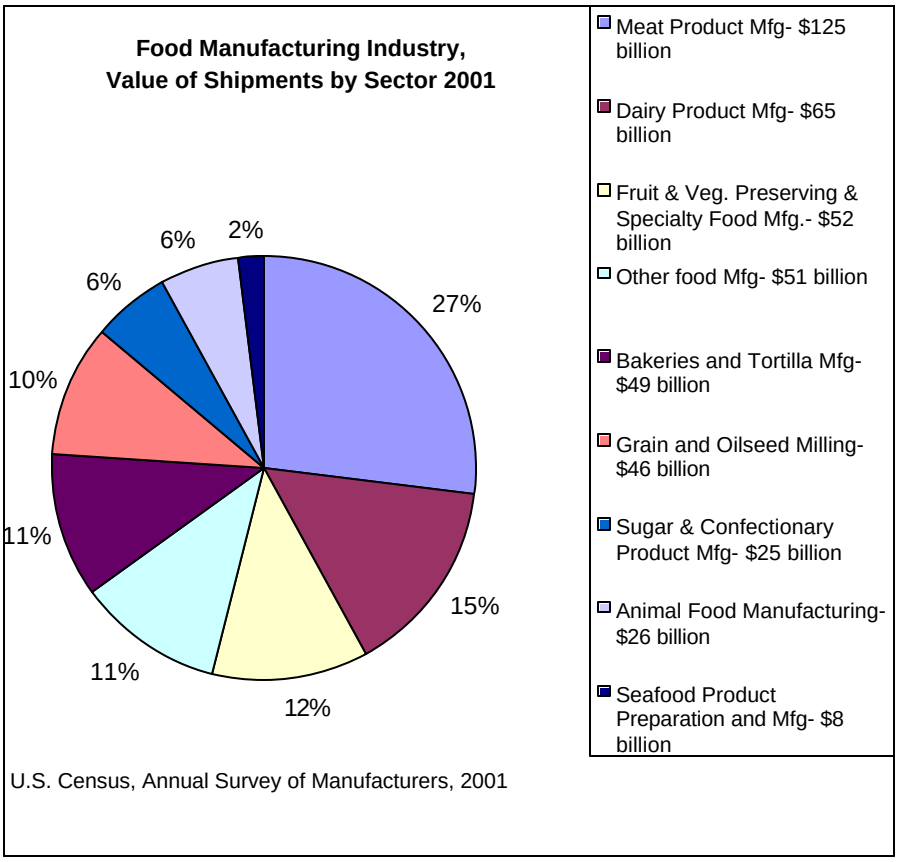
[1] This chart reflects growth in current dollars, not real dollars and does not account for changes in inflation.



Nature of the Industry

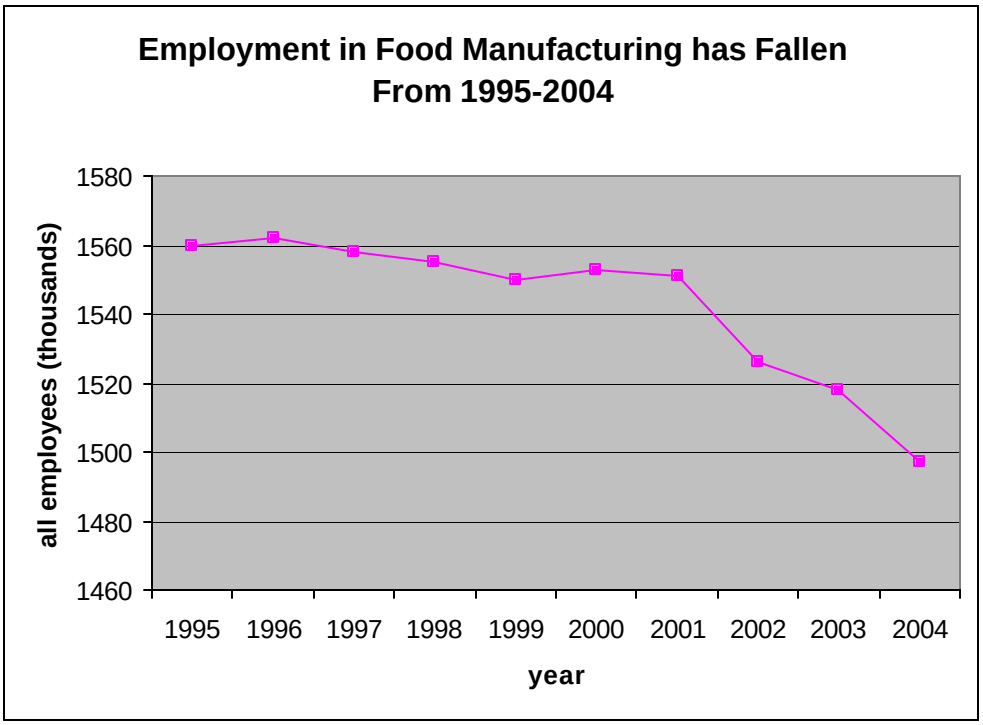
Processed foods are "value-added" products, referring to the fact that a raw commodity or commodities are transformed into a processed product through use of materials, labor, and technology. Any product that requires some degree of processing is referred to as a processed product, regardless of whether the amount of processing is minor, such as for canned fruit, or more complex, such as for snack foods.

Of the sub sectors that make up the food manufacturing industry, the largest four: meat products; dairy products; fruit and vegetable preserving and specialty food; and other food, made up 65 percent of total industry shipment values of $451 billion in 2001. Other sectors included bakeries and tortilla manufacturing, which accounted for 11 percent, grain and oilseed milling (10 percent), sugar and confectionary (6 percent), animal food manufacturing (6 percent) and seafood products (2 percent).



Employment

Employment in the industry declined 4% from 1995 to 2004, decreasing from 1.56 million to 1.50 million. Better technology and increasing automation allowed companies to increase production while relying on fewer employees. The Bureau of Labor Statistics expects overall wage and salary employment in food manufacturing to increase by 5 percent over the 2002-12 period, compared with 16 percent employment growth projected for the entire economy.



Source: Bureau of Labor Statistics

The meat industry employed the largest number of workers in 2004 employing 34 percent of total industry workers.

Industry	**Employment 2004 (thousands)**	**%**
Food Manufacturing	1497.4	100.0
Animal Slaughtering and Processing	505.3	33.7
Bakeries and Tortilla Mfg	287.8	19.2
Fruit & Veg Preserving and specialty	181.7	12.1
Other Food Products	154.1	10.3
Dairy Products	132	8.8
Sugar and Confectionary	83.7	5.6
Grain and Oilseed Milling	60.6	4.0
Animal Food	50.7	3.4
Seafood product prep and pkging	41.6	2.8

Source: Bureau of Labor Statistics

Industry Shows and Trade Events

November 15-18, 2005: Food & Hotel China 2005, Shanghai, China

December 8-10, 2005: IFE India, http://www.ife-india.com/, New Delhi, India

January 22-24, 2006: Fancy Food Show, http://www.specialtyfood.com/do/fancyFoodShow/LocationsAndDates, San Francisco, CA

February 19-21, 2006: Canadian Food & Beverage Show, http://www.crfa.ca/tradeshows/fbshow.asp, Toronto, Canada

March 6-10, 2006: Alimentaria 2006, http://www.alimentaria.com/eng06/portada.htm, Barcelona, Spain

March 14-17, 2006: Foodex Japan, http://www.imexmgt.com/shows/foodexjapan2005/, Tokyo, Japan

March 19-22, SNAXPO, 2006, Las Vegas, Nevada

April 25-28, 2006: Food & Hotel Asia, http://www.foodnhotelasia.com/, Singapore, Singapore

May 7-9, 2006: FMI Show 2006, http://www.fmi.org/events/may/2006/index.cfm, Chicago, IL

May 20-23, 2006, National Restaurant Association Show, http://www.restaurant.org/show/attendees/index.cfm, Chicago, IL

June 6-8, 2006, All Candy Expo, www.allcandyexpo.com, Chicago, IL

July 9-11, 2006: Fancy Food Show, http://www.specialtyfood.com/do/fancyFoodShow/LocationsAndDates, New York, NY

October 22-26, 2006: SIAL Paris 2006, http://www.sial.fr/en/2006/index.html, Paris, France

State and Local Issues

Regulations affecting the processed food industry vary among states and localities. The processed food industry has sought to achieve national uniformity in laws that regulate the industry since complying with a myriad of differing state laws can be prohibitively

expensive, especially for small manufacturers. Some legislative movement toward national uniformity has taken place. The U.S. Congress has included uniformity provisions in several regulatory laws, including the Nutrition Labeling and Education Act of 1990 and the Food Quality Protection Act of 1996. Legislation to establish national uniformity in food regulation more broadly has been introduced in Congress but has never been enacted.

Labeling requirements are one area in which state food laws vary. Although federal law currently sets requirements for identifying the country of origin of food imports, many state legislatures have proposed legislation requiring additional country-of-origin labeling requirements. However, federal country of origin labeling takes precedent over state labeling. Some states have also proposed their own labeling laws to identify food that is genetically modified.

Varying state laws regarding taxation and other restrictions have also been a concern to the industry. Several states have proposed implementing food taxes on selected food products such as soda and snack foods due to concern with rising levels of obesity. Other states have put restrictions on selling sodas or candy products in schools.

Technology

Food manufacturers are increasingly concerned with implementing greater automation in manufacturing processes. Budgeted spending for plant equipment, upgrades, and automation is currently at strong levels compared to past years. According to the Bureau of Labor Statistics, increasing use of automation and advances in manufacturing technology are increasing productivity in the food manufacturing industry. This is limiting employment growth in some sectors of the industry. In particular, automation is being heavily used in packaging, inspection, and inventory control. Use of computers for administrative and management tasks has also grown substantially. However, use of technology has been limited in effectiveness of automating some handworking tasks such as cutting and chopping in areas such as meat packing, slaughtering, and fish cutting.

According to *Food Engineering*, other key issues for plant manufacturers include adequately addressing issues such as plant security, food safety, and energy costs. Trends such as preferences in low-carb diets, portable portion sizes, and plastic packaging have also affected manufacturing operations.

Use of radiofrequency ID (RFID) tags is still limited in the food manufacturing industry due to its prohibitively high cost. The technology consists of tagging pallets with RFID tags to track goods through the supply chain from the factory floor to the store. Although it is currently not used on a widescale basis on individual products, it could be headed that direction if technology costs drop. Walmart recently required its top 100 suppliers to have this technology in place to track pallets by the start of 2005. And according to a

2004 Food Engineering Survey, 22 percent of respondents indicated that their companies had RFID-tag initiatives underway.

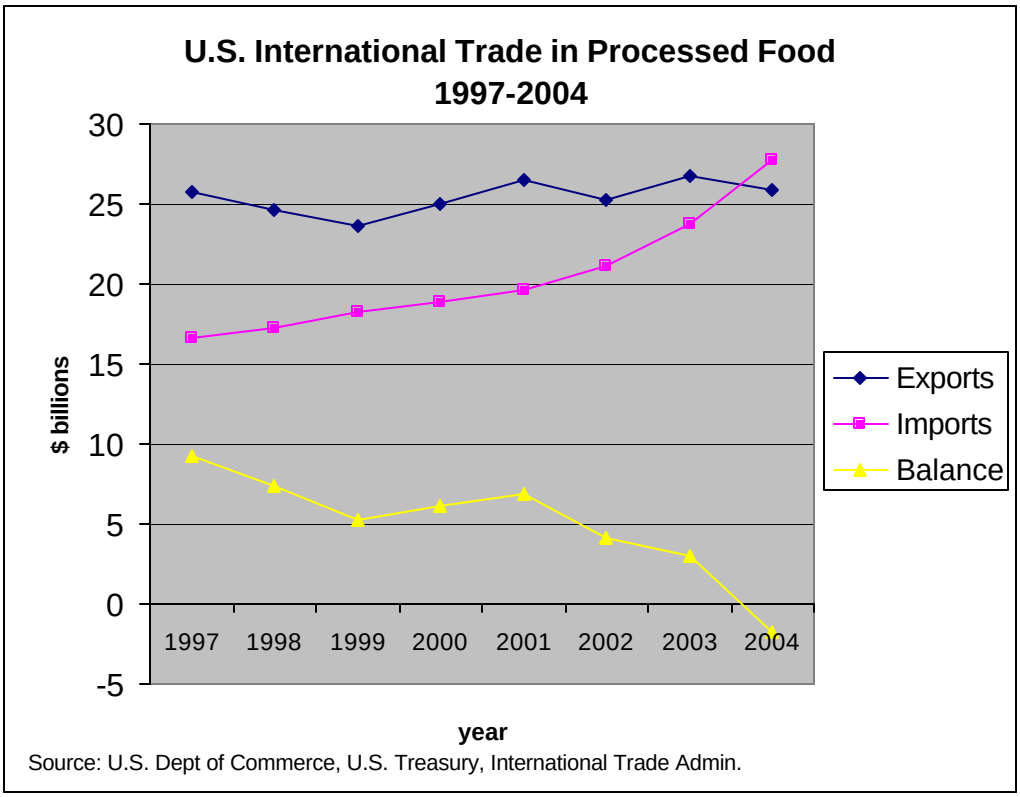
World Market and Trends

The U.S. processed food industry is a major participant in the global economy, active in both exporting and foreign direct investment. More than a third of the world's top 50 food and beverage processing firms are headquartered in the United States (19 out of 50 in 2004 according to *Food Engineering*). Major foreign competitors were Nestle (Switzerland), Unilever (England), Groupe Danone (France), Diageo (England), Kirin Brewery (Japan), SABMiller (South Africa), Cadbury Schweppes (England), Heineken (Netherlands), and Asahi Breweries (Japan).

Global food consumption patterns are changing according to USDA, leading to increased trade and demand for processed food products. Improvements in transportation, higher income, and consumer perceptions of quality and safety are important factors affecting sales of processed food. Income growth in developing countries has resulted in increased demand for meat products which then drives demand for imports of products such as animal feed. In countries with low-income levels, consumers need to meet basic calorie requirements and any increases in income lead to consumption of carbohydrates, which are high in calories. In higher income countries, consumers are able to meet their basic calorie needs and, thus, demand for food is driven by taste, cultural trends, quality, and convenience. In developed countries, higher income growth has led to more demand for high value added and better quality processed food products. Increased demand for these items can be met domestically and/or by increasing imports.

In 2004, the U.S. processed food industry exported $25.9 billion of product and imported $27.7 billion. The processed food industry's trade surplus has been narrowing over the last several years and in 2004 turned into a trade deficit of $1.8 billion.[2] (see chart).

[2] This chart reflects growth in current dollars, not real dollars and does not account for changes in inflation



Source: U.S. Dept of Commerce, U.S. Treasury, International Trade Admin.

Imports

Growth of processed food imports can be in large part attributed to the rise in import prices since 2001, especially from Canada and the EU. The depreciation of the dollar has made imported goods more expensive and demand for those goods has proven relatively inelastic to price increases.

In 2004, five countries accounted for 53 percent of U.S. imports of processed food products: Canada (31%), Mexico (7%), Australia (6%), New Zealand (5%), and China (5%).

U.S. Trade Patterns in Food Manufacturing (NAICS 311) in 2004
(millions of dollars; percent)

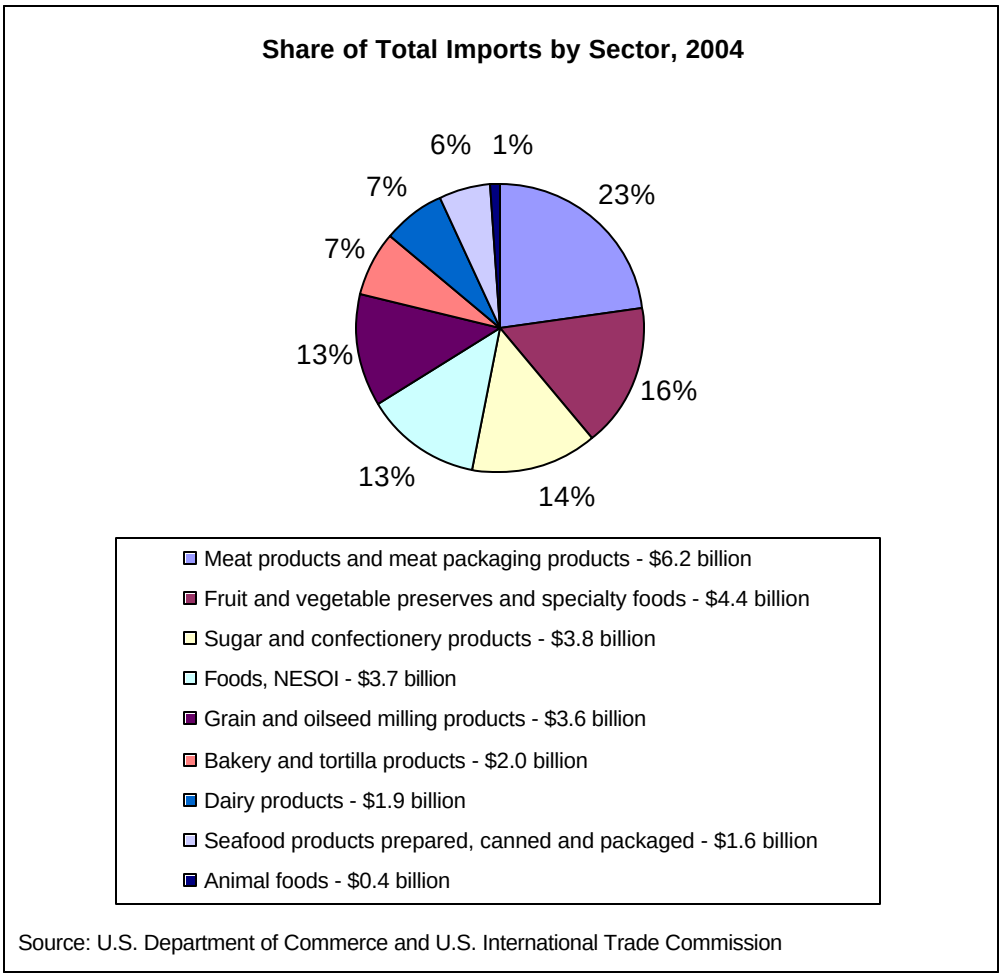
Imports

Region	Value	Share, %
NAFTA	10,378	37
EU 25	5,072	18
Rest of World	4,062	15
Other Asia	3,255	12
Latin America	3,195	12
Japan/Chinese Economic Area	1,771	6
Total	**27,733**	**100**

Top 5 Countries	Value	Share of Total, %
Canada	8,509	31
Mexico	1,869	7
Australia	1,628	6
New Zealand	1,343	5
China	1,280	5

Increased demand for processed food imports has occurred as the population has grown and become more diverse, and as a result of rising incomes. Imports are also important to supply seasonal fresh fruits and vegetables when domestic production is low.

Meat products and meat packaging products make up the largest share of the $27.7 billion in overall processed food imports in 2004 (23%). This was followed by fruit and vegetable preserves and specialty foods (16%), sugar and confectionery products (14%), miscellaneous foods (13%), and grain and oilseed milling products (13%).



Exports

Processed food exports have experienced relatively slow growth and most recently a slight downturn. This can be attributed to several factors. First, foreign direct investment has grown at the expense of trade. USDA reports that U.S. food companies sell five times more ($150 billion) through FDI sales than through U.S. export sales ($30 billion). The technology for processing food is relatively mobile which allows food companies to locate their plants in foreign markets and allows them to cater to the growing number of supermarkets in developing countries that prefer to source locally.

Also moderating growth in processed food exports is intense competition in the global food industry, as well as relatively high tariffs on processed products.

In 2004, five foreign countries accounted for 60 percent of U.S. processed food exports: Canada (23%), Mexico (18%), Japan (12%), China (4%), and Korea (3%).

U.S. Trade Patterns in Food Manufacturing (NAICS 311) in 2004
(millions of dollars; percent)

Exports

Region	Value	Share, %
NAFTA	10,456	40
Japan/Chinese Economic Area	5,293	20
Rest of World	3,285	13
Latin America	2,335	9
Other Asia	2,291	9
EU 25	2,235	9
Total	**25,895**	**100**

Top 5 Countries	Value	Share, %
Canada	5,854	23
Mexico	4,601	18
Japan	3,079	12
China	1,076	4
Korea	894	3

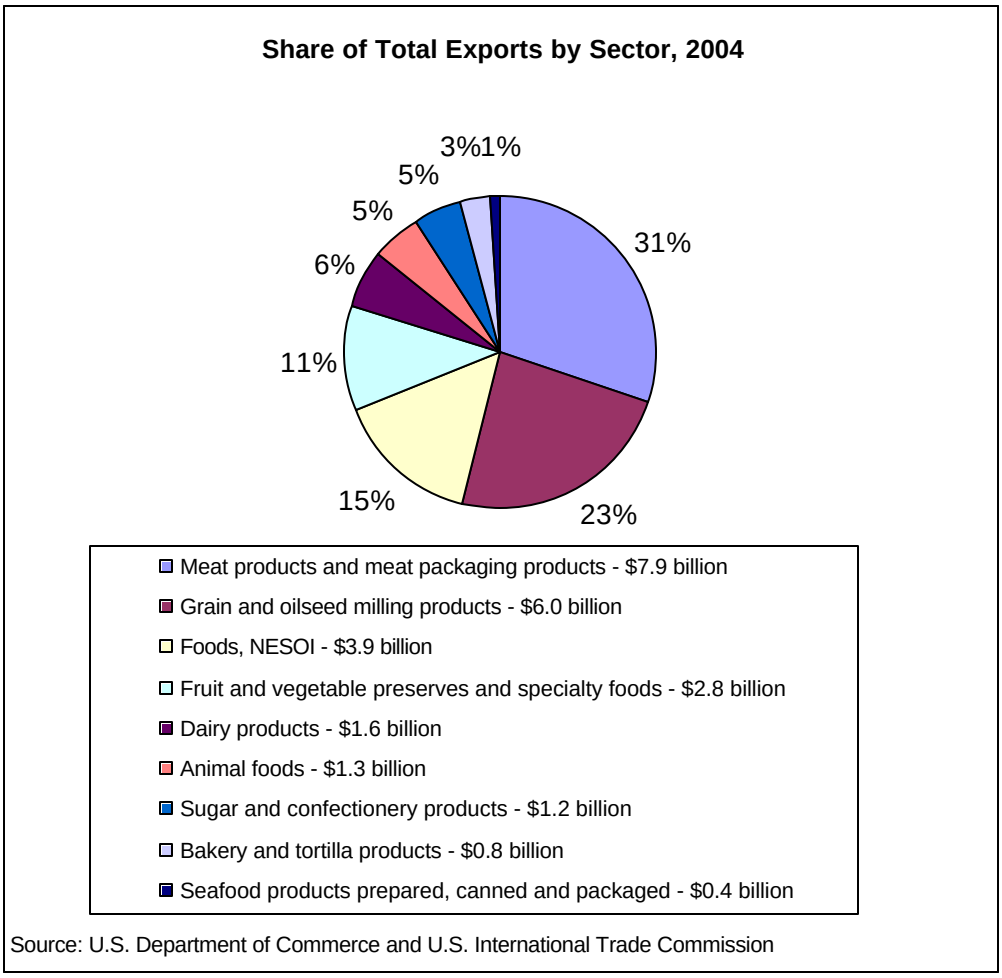
Source: U.S. Department of Commerce, Bureau of the Census

From 1997-2004, U.S. processed food exports to Canada and Mexico increased 63% to $10.5 billion. The North American Free Trade Agreement (NAFTA) has had an influential role in increasing exports and imports between Mexico, Canada, and the U.S. NAFTA has allowed processed food firms increased operational flexibility regarding how to meet "just in time" delivery requirements of customers, particularly along border regions of NAFTA countries. Also, NAFTA investment provisions that guarantee equal treatment for foreign and domestic investors have proven beneficial and have resulted in increased U.S. direct investment in Mexico and Canada's processed food industry.

NAFTA also eliminated most Mexican and Canadian tariffs on U.S. processed food exports, which were as high as 20% on such products as chocolate and preserved meats before NAFTA took effect. U.S. firms now have a price advantage over competitors who have to pay an average tariff of 24% in Mexico's market. Sectors that have particularly benefited include milk and cream products, breakfast cereals, prepared meats, and processed fruits and vegetables.

Retail sales of food products increased relatively quickly in many developing and lower-middle income countries through the late 1990s and demand in Asian markets is expected to increase significantly into the near future. As developing countries experience income increases, demand for processed food grows, especially for higher valued food products such as meat. In developed countries, increased demand comes for convenience and specialty food products.

Meat products and meat packaging products made up the largest share of the $25.9 billion in overall processed food exports in 2004 (31%). This was followed by grain and oilseed milling products (23%), miscellaneous foods (15%), and fruit and vegetable preserves and specialty foods (11%).



According to the U.S. Department of Agriculture, the best niche markets for processed food exports in the top five largest export countries are the following:

Canada: Snack foods, processed fruits and vegetables, red meats

Mexico: Fish and seafood, processed fruits and vegetables, dairy products, snack foods, red meats, poultry meat, eggs and products, soybean meal, soybean oil, wheat flour

Japan: Pork, beef, snack food, frozen vegetables, tree nuts, pet food, cakes, waffles, pies, salmon, functional foods, food preparation products, chicken, cheese, cod's roe, rice, cod

China: Red meats, processed fruits and vegetables, poultry meat, dairy products, tree nuts, breakfast cereals, salmon, crustaceans

Korea: Red meat, poultry meat, offals and guts, hay and fodder, chocolate, frozen and processed vegetables, fish and seafood, almonds, sauces, pet food, horses